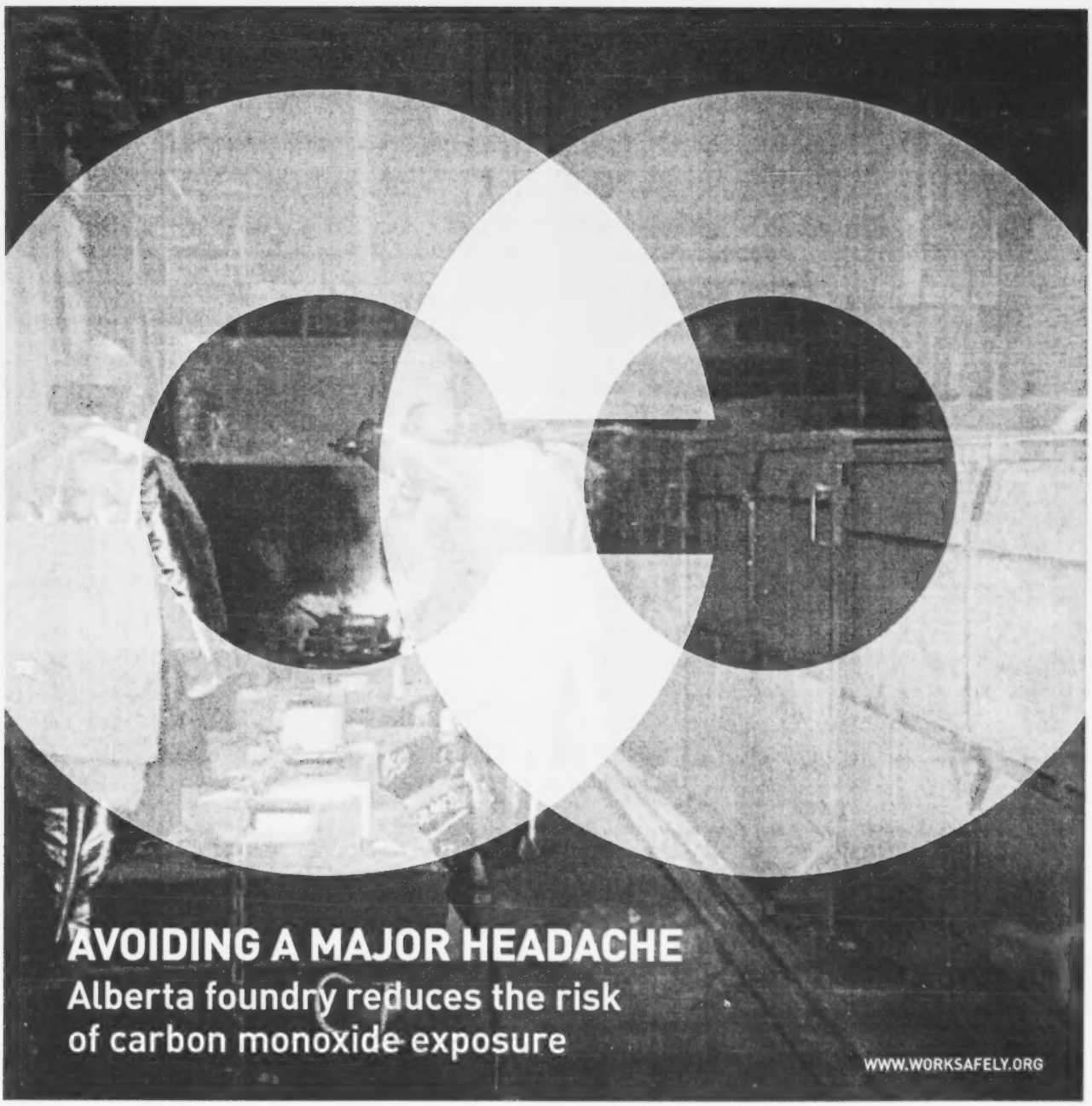
OCCUPATIONAL
HEALTH & SAFETY
MAY 2008



AVOIDING A MAJOR HEADACHE

Alberta foundry reduces the risk of carbon monoxide exposure

WWW.WORKSAFELY.ORG

SERVICE RIG INDUSTRY COLLABORATES ON SAFETY

by Don Herring

Note from Managing Editor: We heard from the Canadian Association of Oilwell Drilling Contractors (CAODC) about a statement made in the September 2007 issue of the magazine. The article entitled "Boot Camps and Interactive Videos" described the service rig sector as "an industry that is plagued by high turnover, few training options and high injury rates." In this issue, Don Herring, president of CAODC, offers an industry perspective on safety on the rigs.

The service rig industry is a strong community, one that is used to working together to address the challenges faced by an industry that works in the dynamic, fast-paced environment of the Canadian oil patch. Companies within this industry take a collaborative approach to implement solutions across the sector. This co-operation is nowhere more strongly supported than in initiatives dealing with workplace safety.

In recent years, the service rig industry has enjoyed high activity levels. Despite this period of heightened workloads, the industry has focused both on safety and on lowering injury rates. We have reduced lost-time incidents by more than 50 per cent since January 2005. Total Recordable Injury Frequency (TRIF) stands at 40 per cent of what it was in 2005. These substantial decreases indicate that the industry is making the right choices when it comes to addressing workplace safety.

Enform training

For years the upstream oil and gas industry has supported its own training division—Enform. Enform has been a valuable resource in the service rig industry's ability to improve training options. With industry input, it develops and provides courses specific to the training needs of this sector. Among these courses is Pre-Employment Floorhand Training for Service Rigs, which prepares students to recognize the types of hazards they might encounter on the job. Enform also provides service rig contractors with the tools to implement competency programs within their companies. These programs help contractors manage the on-the-job training and assessment of field employees.

Certificate of Recognition

Additionally, the service rig industry participates in the Certificate of Recognition (COR) program. The application for COR designation gives individual companies the opportunity to measure and demonstrate their commitment to workplace safety.

Companies that apply for COR designation must complete an audit that assesses their safety program. The COR process does not merely track statistics. A thorough audit identifies the company's approach to the policies and practices that achieve a safer worksite.

Companies in this industry vary from very small operations with only one or two rigs to very large, complex organizations. Because of this variance, a COR audit must be more than a questionnaire that offers a spreadsheet of checked boxes. COR audits are developed by specifically trained and certified auditors. These auditors discuss with the appropriate company personnel the many aspects of the company's safety program and how its different components are implemented. The COR designation is granted after determining a company's commitment to practise the policies that make up its safety program.

Seventy three service rig companies—representative of more than 90 per cent of Canada's service rig fleet—hold COR designations and undergo regular audits to maintain these designations.

There are challenges inherent to the nature of service rig work—a brisk pace of activity, heavy equipment and harsh weather conditions—but with the implementation of tools like Enform's pre-employment course and the COR designation, these employers have rallied behind the push for a safer workplace. The key to the industry's successes has been industry collaboration and commitment. These qualities will certainly be key to assuring a continued positive trend in the areas of safety and training on Canada's service rigs.

If you're interested in sharing opinions or comments about workplace health and safety issues, please contact the magazine's editor through the WHS Contact Centre, 1-866-415-8690, whs@gov.ab.ca.

OCCUPATIONAL
HEALTH & SAFETY

May 2008, Volume 31, Number 2

Joe Childs Managing Editor
Lee Craig Editor

Occupational Health & Safety is an Alberta Employment and Immigration publication. This magazine is published three times a year, in January, May and September. Magazine policy is guided by the *Occupational Health & Safety* magazine advisory board, which includes members representing both industry and government.

Membership on the *Occupational Health & Safety* magazine advisory board is open to any resident of Alberta with knowledge and experience in health and safety, and an interest in communicating health and safety information to the public. Anyone who is interested in joining the board should submit a letter of application to the managing editor of the magazine. The board meets three times a year in Edmonton. Board members do not receive remuneration or reimbursement for expenses related to meetings. See "Contacting the editor," below.

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The magazine is also available as a PDF file at employment.alberta.ca/cps/rde/xchg/hre/hs.xsl/126.html.

Contacting the editor. We welcome responses to articles or information published in this magazine, as well as suggestions for future articles. You can reach the editor through the Workplace Health & Safety Contact Centre, phone 1-866-415-8690, whs@gov.ab.ca.

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UTILITIES JOIN FORCES WITH GOVERNMENT OF ALBERTA TO KEEP ALBERTANS SAFE

Almost every day across Alberta, three people make contact with overhead or underground power lines, risking serious injury or death. Most electrical incidents involve excavators contacting underground utilities or large equipment and gravel trucks contacting overhead power lines.

Alberta's electric utilities, along with the Government of Alberta, have joined forces to promote electrical safety. The partnership includes FortisAlberta, AltaLink, ENMAX, EPCOR, ATCO Electric and the Government of Alberta. In the fall of 2007, the partnership launched the website www.wherestheline.ca.

The utilities and government have independently run public advertising and education campaigns for years. In 2005 the representatives for each utility met to discuss their common concerns around growing numbers of incidents despite stepped-up advertising campaigns. At the same time, the Energy and Utilities Board (EUB), which approves all regulated utilities spending, noticed the same trend and responded that there may be great benefits from pooling dollars and efforts. Alberta Employment and Immigration was asked to the table because the Ministry promotes workplace electrical safety. Alberta Municipal Affairs was invited because it administers electrical codes and standards.

HEALTH AND SAFETY E-COURSE TAILORED TO ORGANIZATIONS IN THE FEDERAL JURISDICTION

The Canadian Centre for Occupational Health and Safety (CCOHS) launched a new e-course in December that is targeted specifically at health and safety committees in the federal jurisdiction. The e-course can be used as a part of the training that the Canada Labour Code, Part II, requires of employers: to provide health and safety training to members of policy and health and safety committees and representatives.

"Health and Safety Committees in the Canadian Federal Jurisdiction" provides a practical introduction to the roles and responsibilities of a committee and its members. It offers guidance on how to establish a new committee, how to have it function effectively and how to resolve health and safety concerns.

As with all CCOHS e-courses, participants can contact CCOHS subject specialists to ask specific questions that may arise. There are quizzes throughout and a certificate of completion is issued upon passing the exam.

CCOHS courses are unique in that they are developed by experts in the field and reviewed by representatives from labour, employers and government to ensure the content and approach are unbiased and credible. Courses are available in English and French.

Pricing and registration information is available on the CCOHS website at www.ccohs.ca/products/courses/clc_overview/.

OCCUPATIONAL HEALTH AND SAFETY RESEARCH IN ACTION: METHODS, RESULTS AND APPLICATIONS

A national safety research conference will bring together stakeholders and researchers from various disciplines in Montreal, Quebec, on June 15–17, 2008.

This conference is for the exchange of ideas and knowledge about worker and workplace health issues. The conference aims to:

- present research results and innovative research methods
- explore the application of research and identify and clarify needs
- foster collaborations and new research projects
- inform occupational health and safety policies and practices resulting in improved worker health and safety.

For more information, go to: http://www.etsmtl.ca/zone2/recherche/rrsstq/Colloque2008/English/index.html.

RECORD OCCUPATIONAL HEALTH AND SAFETY FINES IN 2007

Fines levied for contraventions of Alberta's Occupational Health and Safety Act reached their highest total ever in 2007.

Twelve companies were fined a total of $1,720,000 in penalties, which topples the 2006 tally of $1,534,500. Of these penalties, $780,000 was ordered by the court to be paid to health and safety organizations as part of creative sentencing orders. Recipients of these funds included STARS, Foothills Hospital Burn Unit, Canadian Home Builders' Association, Threads of Life, Canadian National Institute for the Blind, Manufacturers' Health and Safety Association, and St. John Ambulance.

"I'm pleased the courts continue to send strong, clear messages that workplace health and safety must be taken seriously," said Iris Evans, the former Minister of Employment, Immigration and Industry. "Government, industry and labour must also continue to send their own clear messages that workplace health and safety is a priority and that senseless, preventable incidents simply won't be tolerated."

The two highest penalties in 2007 were each for $350,000. One related to an incident in April 2004, when a 25-year-old New Concept Contracting employee was run over by an unattended backhoe in High River. The other incident was in September 2003, when a 34-year-old welder with D.J.Z.'s Welding was killed in Edmonton when a methane explosion threw him against the wall of a tank.

The two top recipients through creative sentencing were the Manufacturers' Health and Safety Association, which was awarded $195,000 resulting from a 2003 incident at Westcon Precast in Calgary, and STARS Air Ambulance, which was awarded a total of $190,000 resulting from two incidents near Hinton and Edson in 2003.

The maximum penalty for a first offence under the Occupational Health and Safety Act is $500,000 and/or six months in prison for each charge.

HAS WORKPLACE SAFETY BUILT A BETTER MOUSETRAP?

by Bob Christie

While templates for safety manuals are nothing new, Stacey Malitowski, CEO of Lethbridge-based Workplace Safety and Healthcare Services, may well have built a much bigger and better mousetrap.

SafeWorker is an online tool that has a large library of ready-to-use material. And it's not just for general safety manuals. Do you need a job-specific manual for a contract you won (or to impress the bid selection committee)? You can build the manual in less than half an hour even before you get the job. Do you need a safety handbook for truck drivers, a different one for grader operators and still another for maintenance crews? SafeWorker is the tool to use—you have access to your manuals wherever you can reach the Internet.

You can print your manual with different size options, single- or double-sided, and coil bound or saddle stitched. You can build an infinite number of training manuals for every use imaginable.

John Webber created the core of this innovative product. John, a long-time safety expert, sold his efforts to Stacey and then signed on as a contractor. Now John is working to make the forms in the package interactive so they can be used on laptops in the field.

You can reach Stacey or one of his people at (403) 394-9075 (toll-free at 1-877-394-9006) or by e-mail at Stacey@safeworker.ca. More details and demos are available at www.safeworker.ca.

I am broadening the scope of my column to include innovations that are not Internet based. For those many people I was not able to satisfy in my limited space, please be patient. I will try to get to you in September and on into 2009. If you have an idea or think I have forgotten you, please send me an e-mail at bchristie@shaw.ca.

Bob Christie, a partner at Christie Communications Ltd., supplies most of the web link resources for the articles in this magazine.

PARTNERSHIPS NEWS

Changes Within
Nancy Muir decided to retire in March. Nancy joined Partnerships in 2006, and she has been a valuable member of the team. Nancy's contributions to the program have been extensive, and we will miss her greatly. All the best in retirement Nancy!

Partnerships Introduces Standard Audit Quality Assurance Process
Since the inception of the Partnerships in Health and Safety program, Certifying Partners (CPs) have been guided by Partnerships' standards for audit quality assurance. But with each CP responsible to develop their own processes for conducting quality assurance, differences in how reports were being reviewed from one association to another were inevitable. As the Partnerships program grew, the differences between CP quality assurance methods became more and more apparent. They led to the perception that audit report quality was not the same from one industry to another. In response to this concern, Partnerships has developed a more detailed standard around audit review, and a standard quality assurance form, which will allow all CPs to conduct audit reviews to a more consistent standard.

The new quality assurance form focuses on identifying significant issues that directly affect the quality of the audit and its accompanying report, and requires that all critical issues be corrected before an audit report can be approved by the reviewer. Issues that are considered critical would include incorrectly applied scoring, incomplete data, inadequate or contradictory notes, and contradictions between results for related questions.

CPs who opt to use the scored version of the audit review sheet must use a pre-determined weighting system. The system requires auditors to achieve a minimum quality assurance (QA) score of 80 per cent before an audit report can be approved. Auditors should note, however, that a QA score of 80 per cent or better does not guarantee an audit report will be approved. If any issues deemed critical have been identified, these must be corrected before a report can be finalized. CPs who do not want to score the quality of an audit report have the option of using a non-scored version of the quality assurance form and requiring auditors to correct all issues identified by the reviewer.

The CPs approved the new QA form for implementation by January 1, 2009, but several associations have already begun using the new document.

A generic version of the form designed for use for the Partnerships audit instrument is available for viewing at employment.alberta.ca/cps/rde/xchg/hre/hs.xsl/325.html.

Use of Interview Questionnaires
A number of questions have been raised about the use of Interview Questionnaires in lieu of in-person or face-to-face worker interviews.

First of all, the employer being audited (in consultation with the auditor) needs to verify that the Certifying Partner (CP) recognizes the use of Interview Questionnaires. Where the CP does recognize the use of questionnaires, the employer and auditor need to identify the number and percentage of interviews they want to replace with questionnaires. This number cannot exceed 50 per cent of the total worker interviews required.

Highlights

The questionnaire has to be administered in a controlled environment:

- It can be used only if the worker population is literate.
- It should be offered as an option to interviewees, who may choose instead to participate in a traditional face-to-face interview.
- Auditors can administer the questionnaire to groups, as long as no group decision making is allowed.
- The questionnaire is the only alternative to face-to-face interviews.

Remember, the wrong or inappropriate use of the interview questionnaire method could jeopardize the employer's ability to achieve their Certificate of Recognition (COR). When in doubt, consult the CP for direction.

Q&A About Interview Questionnaires

1. **Question:** Our CP does not offer the use of questionnaires—what can I do?

   Answer: Partnerships does not require CPs to use interview questionnaires. So, in these cases proceed with the audit as usual. Complete the required number of in-person interviews.

2. **Question:** Can I write my own interview questionnaire?

   Answer: No, the interview questionnaires are created by the respective CP.

3. **Question:** As the auditor, can I leave the controlled environment after I hand out the questionnaire?

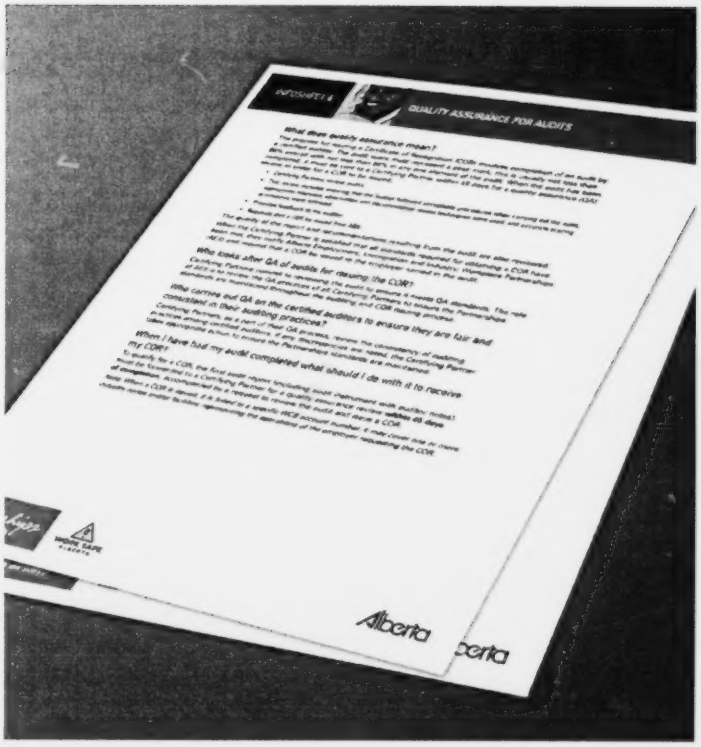
   Answer: No, you must remain present to answer questions. This applies whether there is one person, or a room full of people, completing the questionnaire.

4. **Question:** Can I hand out the questionnaires at the start of the audit and collect them at the end of the audit?

   Answer: No, questionnaires must be administered in a controlled environment. Consult with the CP in special circumstances.

5. **Question:** Do I need to record how many interview questionnaires I administered in the audit report?

   Answer: Yes, this must be done as part of justifying your interview sample. You must indicate the number of questionnaires administered, which shift and if the interviewee is full time, part time or casual.



Partnerships
IN HEALTH AND SAFETY

Partnerships in Health and Safety is a non-regulatory, province-wide injury prevention program sponsored co-operatively by government, labour and industry. The program offers the following:

- tools to implement a health and safety management system
- guidance in applying for a Certificate of Recognition (COR)
- potential for premium refunds from the Workers' Compensation Board-Alberta

For more information, call the Partnerships Hotline at 1-866-415-8690 or visit employment.alberta.ca/whs-partnerships.

AVOIDING A MAJOR HEADACHE

ALBERTA FOUNDRY REDUCES RISK OF CARBON MONOXIDE EXPOSURE

by Shelagh Kubish

When Robert Day took over as general manager of the Norwood Foundry in Nisku he faced an immediate challenge in the work environment. Workplace Health and Safety (WHS) had put Norwood on its Targeted Employers list. An inspection then found that the levels of carbon monoxide in the foundry were too high. Day had to make changes right away to improve the air quality in the foundry.

"We were in his bad books," Day says of Robert Gilchrist, an Occupational Health and Safety officer and technical advisor for WHS. Gilchrist worked with Day in rectifying the carbon monoxide problem at Norwood—and they fixed it. Day and his team did such a good job that the foundry won a 2008 Health and Safety Innovation Award of Distinction sponsored by Work Safe Alberta and the Occupational Health and Safety Council.

About 500 companies make the WHS Targeted Employers list every year. WHS works with these companies to address issues in workplace health and safety.

Low-level exposure risks

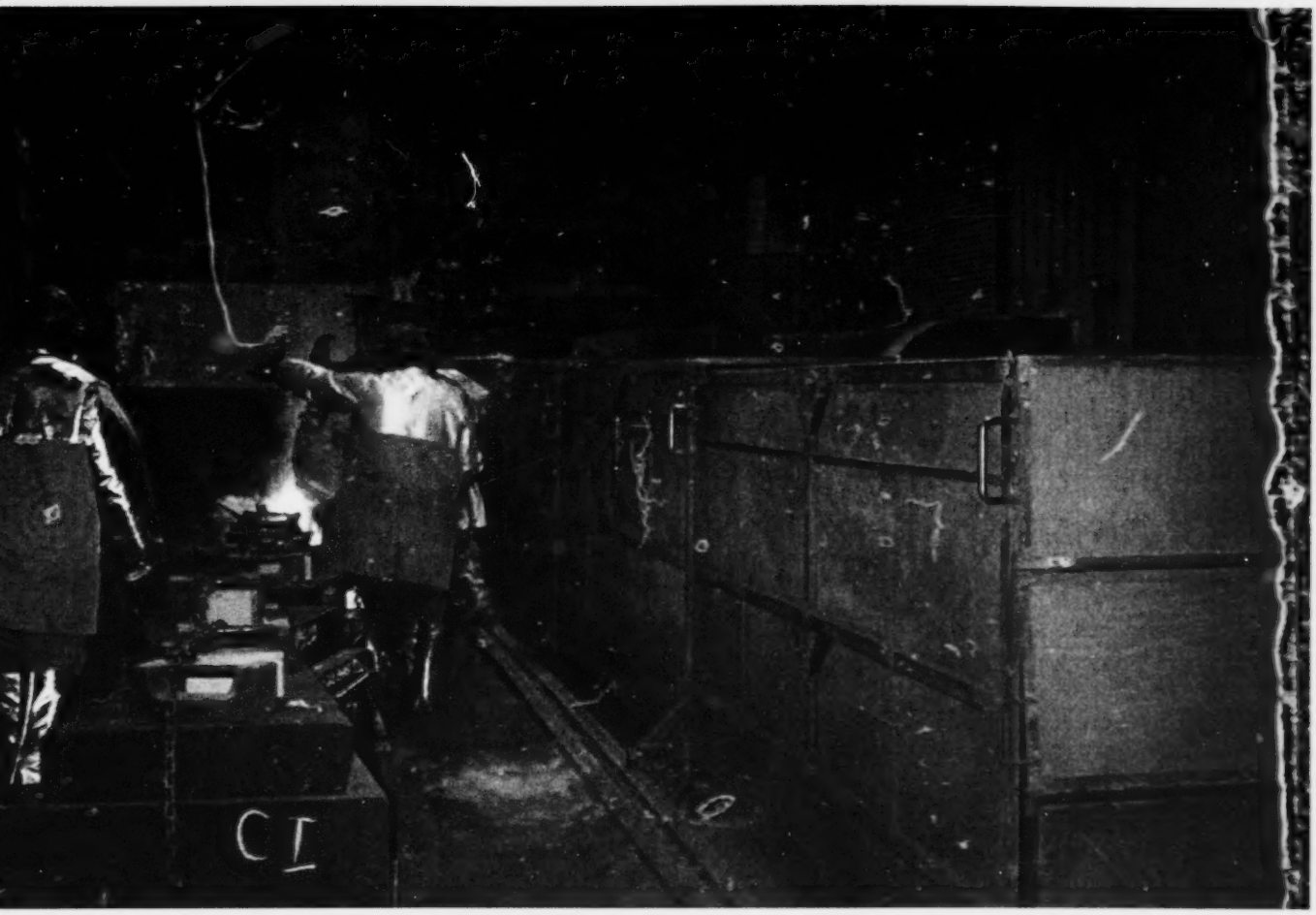
Most people might think of fatal, high levels of carbon monoxide when they hear about exposure incidents. At Norwood, the issue was with low levels of carbon monoxide over long periods of time. Low-level exposure can produce chronic, flu-like symptoms and is usually not recognized.

According to the Occupational Health and Safety Code, the eight-hour occupational exposure limit for carbon monoxide is 25 parts per million (ppm) (see the "Air concentrations and acute health effects of carbon monoxide" chart, p. 10). Joanne Garton, senior regional manager for WHS Compliance–North, says, "The legislation is in effect to prevent exposure to high concentrations of carbon monoxide. Workers overexposed to carbon monoxide may exhibit health symptoms."

> When carbon monoxide is produced in an enclosed space or where there is poor ventilation, it can build up to potentially harmful levels.

Carbon monoxide is a common hazard that results from the incomplete burning of fuels and any other materials containing carbon. Since carbon monoxide has no colour or odour and is not irritating, workers may be unaware for some time that they have been exposed.

All foundries have the potential for the problem Norwood Foundry faced. "It's because of the binders in the sand," says Gilchrist. "All foundries use sand as a medium for casting, and it wouldn't work without the binders in it.



When the hot metal hits the binders, partial combustion takes place and carbon monoxide is released."

Workplaces that could have carbon monoxide problems include any that use internal combustion engines, kilns, furnaces and boilers. The process of welding produces carbon monoxide, as does moulding of plastics. When carbon monoxide is produced in an enclosed space or where there is poor ventilation, it can build up to potentially harmful levels.

Health effects

Breathed in through the lungs, carbon monoxide interferes with the blood's ability to carry oxygen. Carbon monoxide combines with hemoglobin in the blood. The more carbon monoxide in the blood, the less oxygen the blood will be able to carry.

The lack of oxygen especially affects the heart and brain, so workers exposed to low concentrations of carbon monoxide (less than 50 ppm) may experience such symptoms as tightness across the forehead or mild headaches. Continued exposure or exposure to higher levels could lead to dizziness, confusion, nausea, fainting and weakness.

The levels in the Occupational Health and Safety Code are limits for what is acceptable. Diane Radnoff, senior occupational hygienist at the Workplace Policy and Standards Development Branch, says that some workers may feel greater effects than others. "People who have a pre-existing health condition—such as heart trouble—or who work at high altitudes, where the oxygen level in the air is already lower, are more sensitive to carbon monoxide exposure." In addition, if workers are putting in shifts longer than eight hours, the exposure limit must be adjusted. Carbon monoxide is eventually breathed out. Within four hours after exposure stops, about half of the carbon monoxide in the body will be exhaled.

Control it at the source

The best way to protect against the health effects of carbon monoxide exposure is to prevent the exposure, says Garton. It is not the best solution to simply reduce the concentration of carbon monoxide in the air by blowing in additional fresh air. It is better to control at the source of the problem by using a local ventilation system. After all, in Alberta's climate, extra fresh air is likely to be very cold air much of the year, leading to uncomfortably cold workers and high heating bills.

Controlling the carbon monoxide at the source of the problem is exactly the approach taken at Norwood Foundry. Their innovative, relatively low-cost solution to the problem of carbon monoxide in the foundry is, simply put, a series of local exhaust systems installed where

needed. Robert Day appreciated the support the foundry got from WHS as he and the workers at the foundry experimented to find a solution.

"First we tied plastic sheets to a frame and used smoke bombs and fans to understand how the air flowed," he says. "After experimenting, we did plans and built a prototype and then improved it as we learned more."

The three carbon monoxide control systems in use at Norwood Foundry are all based on the same principle. The company installed a series of connected hoods in each area where carbon monoxide is given off by the process of hot metal interacting with the resin in the moulds. The hoods can be pulled down to create a tunnel around the area where the carbon monoxide is produced. The tunnel is then ventilated, so that the air containing carbon monoxide is pulled out of the building and away from the workers.

> "There is a level of responsibility on the part of the employer...The workers are alert and healthy and happy now."
> —Robert Day

"We tried to think about how we could capture the air and direct it at a low speed into the ventilation area. It's a small amount of air going the right way," says Day.

Garton agrees. "Norwood's approach is ideal," she says. "They aren't simply diluting the air but controlling it by capturing and removing the air laden with carbon monoxide at its source."

Positive changes

Robert Gilchrist is impressed with the changes he's seen Norwood put into place. "The last time I was there with my monitor," he says, "I was getting readings of 0 ppm in most work areas. Previous to that some locations measured as high as 150 to 200 ppm. It is very, very impressive how much it improved."

Following the advice of WHS and addressing the carbon monoxide issue in the foundry was the right thing to do, Robert Day says.

"There is a level of responsibility on the part of the employer," he says. "The workers are alert and healthy and happy now. It allowed me on a personal level to walk into a place where our workers knew there was a problem, and within six months lead the team to a solution that provided a meaningful improvement in the quality of life in the plant. It really is nice to say 'Guys, we did this together.' "

Shelagh Kubish is an Edmonton writer and editor.

AIR CONCENTRATIONS AND ACUTE HEALTH EFFECTS OF CARBON MONOXIDE

(taken from Workplace Health and Safety Bulletin: Carbon Monoxide at the Work Site)

concentration (ppm)	health effects
less than 50	mild headache
50 to 200	severe headache
200 to 400	weakness, dizziness, nausea, fainting
400 to 1200	increased/irregular heartbeat
1200 to 2000	loss of consciousness, death
2000 to 5000	death may occur in minutes

RESOURCES

WEB LINKS

www.iapa.ca/pdf/carbon_monoxide_feb2003.pdf
Carbon Monoxide in the Workplace, Industrial Accident Prevention Association

employment.alberta.ca/documents/WHS/WHS-PUB_ch031.pdf
Carbon Monoxide at the Work Site, Work Safe Alberta

www.ccohs.ca/newsletters/hsreport/issues/2008/01/ezine.html#inthenews
"Exposing the Dangers of Carbon Monoxide," *Canadian Centre for Occupational Health and Safety, Health and Safety Report.*

www.cbc.ca/canada/calgary/story/2008/01/04/monoxide-death.html
"Calgary man succumbs to poisonous fumes," CBC News

VIDEOS

Carbon Monoxide Series (VC 0304)
This program explains what carbon monoxide is and the sources of it, as well as the medical implications of carbon monoxide poisoning. Also discussed are the technology of carbon monoxide detectors and a simulated emergency response to a carbon monoxide poisoning.

STRESSING THE POSITIVE

by Ryan Smith

For years, Dave Siever couldn't make sense of the seemingly random pain patterns in his patients with temporomandibular joint (TMJ) disorder.

Siever, who was working at the University of Alberta Faculty of Dentistry at the time, got inconsistent results from simply treating the physical mechanisms of the jaw-joint disorder. He decided to dig deeper. He conducted studies on his patients and concluded that one consistent factor seemed to correlate with the instances of their pain: the price of oil.

Stress triggers

"The biggest factor in the increase of TMJ pain was tension with a spouse, then job and financial concerns. But this was back in the early '80s and oil was at around $15 a barrel. When the price would go down people worried they or their spouses would have wage roll backs or be laid off, and this would trigger all these other kinds of stress, which would trigger the pain," Siever says.

Siever continued his work on stress triggers, and he now owns and operates an Edmonton-based company that treats people with post-traumatic stress disorder (PTSD), among other neurological and physical ailments, such as depression, anxiety and insomnia.

"Perceived threats, whether they are threats to us physically or to our lifestyles, are the single greatest cause of stress and unhealthy brain chemistry," Siever says. "And these threats can come from anywhere—you name it. You can develop PTSD just from trying to climb the corporate ladder."

John Carmichael knows that stress or trauma at work can lead to all sorts of physical and psychological problems for employees. The Kamloops-based psychologist has worked with active and retired police officers and soldiers for more than 15 years. According to one study, says Carmichael, 42 per cent of all police officers will develop PTSD at some point in their careers.

"And a number of studies have shown that PTSD is closely related with other neurological disorders, such as depression and panic disorders," he adds.

How employers can help

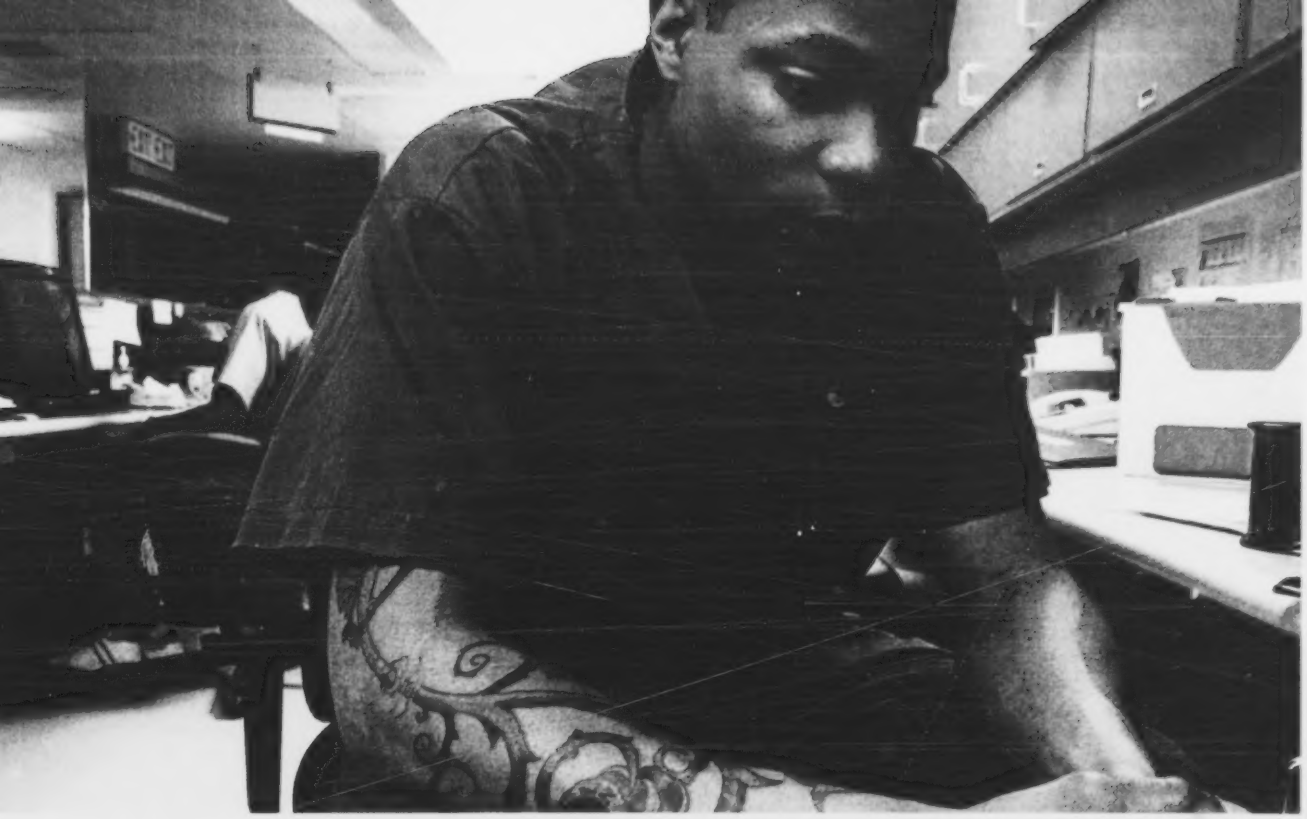
How should employers help their employees? Carmichael says the single most important thing an employer can do to reduce negative stress and foster positive mental health among employees is to create an environment in which employees feel cared about and supported.

"Some of the measures that employers can take are so commonsensical you wonder why they don't implement them more often," says Carmichael.

> "You do your best to stay positive, but sometimes a little help can go a long way."

"Basically, you should provide employees with effective programs that will help them to be productive workers and healthy people—it's simply a matter of treating your employees in a reasonable and humane manner," he adds.

Carmichael also believes that measures to improve the mental health of employees can benefit a company's bottom line.



"Companies that are not supportive and do not promote positive mental health in their employees will find that they have workers who are often on sick leave and are not nearly as productive as they could be," he said.

Peer support

Steve Dongworth, the deputy chief of operations for the Calgary Fire Department, formerly coordinated the fire department's Critical Incident Stress Management (CISM) team.

The CISM program provides a support system for firefighters who suffer from PTSD and other work-related stress disorders. The CISM team can provide group or one-on-one sessions, with the one-on-one interventions provided by firefighter peers who have been trained to help their colleagues.

Dongworth says the CISM program picks people who have been around a few years, who have good communication and listening skills, and who are trusted and credible to their peers.

"Traditionally, the culture in this field was that if you are going through tough times you should just suck it up and deal with it on your own. Fortunately, that has begun to change, and you can see it changing in the services we now provide," Dongworth says.

"The bottom line is that we see and go through a lot of bad things in this job," he adds. "You do your best to stay positive, but sometimes a little help can go a long way."

Be creative

Helping employees may also require creativity.

"If you have an employee who was in a car accident at work and now he's scared to death of driving a company car, then you say, well, let's look for something else he can do other than drive a car, and let's make sure he has adequate training to do it," Carmichael says. "You're just trying to put them in an environment that will help them to succeed."

Carmichael says that some stress in a workplace environment is good stress, and trying to eliminate all stress would be impossible, anyway.

"No matter what steps you take to make your workplace safe, for example, there will still be stress—you can't make a place 100 per cent stress free," he says.

Stay positive

According to Siever, the best way for individuals to ward off stress and depression is to simply maintain a positive attitude.

"It might sound obvious, but people forget that the guy who is just happy to be alive is generally much healthier and better off than the guy who thinks life sucks," he adds.

Maintaining a positive attitude is easier said than done, however, especially when someone is going through or has gone through stressful times.

"With the way the brain works, sometimes feeling stressed and being depressed can be like joining the

WHAT CAN EMPLOYERS DO?

It's pretty simple for employers to help their employees maintain or recover a healthy mental balance, says John Carmichael. He offers a number of tips to help companies "bring their management practices into the 21st century":

- Provide and advertise assistance programs so employees can contact professionals, such as psychotherapists, if they feel they need help.
- Ensure employees are working in the safest possible conditions.
- Avoid asking employees to work excessive hours.
- Ensure all employees are trained for their duties and don't work beyond their capabilities.
- Maintain open lines of communication between managers and all other employees.
- Tell employees when they are doing a good job.
- Create programs that allow employees to work on their own flexible schedules whenever possible.
- Provide employees with on-site fitness facilities or easy access to facilities.
- Develop programs and services that promote healthy eating.
- Provide on-site day care for employees.
- Encourage activities in the work environment that promote laughter and the appropriate use of humour.
- Offer programs that teach employees breathing and muscle-relaxation techniques.

mafia—once you're in it, it can be really hard to get out," Siever says.

"If someone's down and out, we just try to help him reframe things so that he can see things really aren't hopeless and as bad as they seem, and that he has the means to cope with the stress and get better," he says.

Alternatives to psychotherapy

Psychotherapy isn't the only way to adjust how a person thinks. One simple way is to improve nutrition and exercise habits. A less conventional way, but still highly effective, according to Siever, is audio-visual brain entrainment.

Siever's company, Mind Alive, offers clients access to a device he created that emits sound and light stimulation to soothe the brain and change its working patterns.

"The part of the brain that handles rational thinking will shut down under stress," Siever says, "but audio-visual entrainment can dissociate you from your negative thoughts and allow the rest of your brain to function in a healthy balance."

So what happened to Siever's TMJ patients?

"Once the oil crisis was resolved, the incidences of TMJ pain went down—it's amazing how all these things are interrelated," says Siever.

Ryan Smith is an Edmonton freelance writer.

RESOURCES

WEB LINKS

www.carmha.ca/conferences/2007/workplace/en/program/documents/May17-Pinnacle2-WorkplaceTrauma1.pdf
"Guidelines for the Management of Workplace Psychological Trauma," 2nd Canadian Congress on Research on Mental Health and Addiction in the Workplace

www.doereport.com/article_workplaceviolence.php
"Workplace Violence and Psychological Trauma: Clinical Disability, Legal Liability, and Corporate Policy," *The Doe Report*

www.counsellingatwork.org.uk/journal_pdf/acw_summer05_h.pdf
"Putting the psychological aspects of trauma management into an organizational context," *Counselling at Work*

WHS CONTACT CENTRE

STANDING BY TO TAKE YOUR CALL

by Alf Cryderman

The Alberta government's Workplace Health and Safety Contact Centre is an excellent resource for safety information in the province. Its supervisor and four full-time health and safety advisors respond to an average of 22,000 phone calls and 2500 e-mail inquiries every year. Most inquiries are from Albertans, but the centre also takes calls and answers questions from across Canada, and even the United States and Europe.

The WHS Contact Centre, established in 2001, is dedicated to keeping Alberta workers safe and ensuring Alberta work sites comply with provincial Occupational Health and Safety legislation. The goal is to help decrease work site incidents and injuries by providing help and information to workers, employers, private citizens, industry, safety associations, union representatives and safety consultants throughout Alberta.

Jennifer Smith, a contact centre supervisor, says the centre takes all the calls to WHS. The staff inform, interpret and advise the callers about how they can meet the legislative requirements.

"We work closely together so that every caller gets a consistent answer," says Smith.

The centre staff also receive complaints regarding unsafe work sites, notifications of immediate danger, and notifications of work site incidents and fatalities. They act right away and inform health and safety officers.

"Sometimes our biggest challenge is to understand the lingo of the trade," Smith says. "Sometimes we have to ask a lot of leading questions before we can get to the true nature of the inquiry. Usually it's not the big companies with the questions, since they often have their own experienced safety people. It's the smaller companies without full-time safety personnel, or workers or the public, who are asking the hardest questions."

> Health and safety advisors respond to an average of 22,000 phone calls and 2500 e-mail inquiries every year.

The most common questions are about work site hazards such as working at heights.

Smith, who's worked at the contact centre for three years and became supervisor last April, says her job is the best job she has ever had.

"I learn something new every day. It feels so good when you can give people an answer they can use and appreciate."

Alf Cryderman is a freelance writer based in Red Deer.

Phone the Contact Centre at 1-866-415-8690 (415-8690 in Edmonton and area) or e-mail whs@gov.ab.ca.

Another great source of workplace health and safety information is www.worksafely.org, where you can access safety consultants, subscribe to a safety mailing list, download safety e-tools and programs, ask questions or provide feedback. Visitors to the website can also look at the safety programs of Work Safe partners, such as the Alberta Construction Safety Association and the Canadian Federation of Independent Businesses.

OTHER ROLES PLAYED BY THE WHS CONTACT CENTRE

- taking orders for OH & S publications, posters and other promotional items
- providing information about the Partnerships in Health and Safety program and the process for achieving a Certificate of Recognition
- providing information about safety initiatives such as Work Safe Alberta and NAOSH week

RESOURCES

WEB LINKS

employment.alberta.ca/cps/rde/xchg/hre/hs.xsl/2874.html
When to contact the WHS Contact Centre

www.services.gov.ab.ca/cps/rde/xchg/sa/hs.xsl/contact.html?isid=2867&topnav=contact
Contact information for the WHS Contact Centre

WHAT IMPROVEMENTS HAVE YOU MADE AT YOUR WORKPLACE?

If you've found a solution worth sharing, please send it to ray.cislo@gov.ab.ca.

KNEELING CREEPER OR WHEELED KNEELER

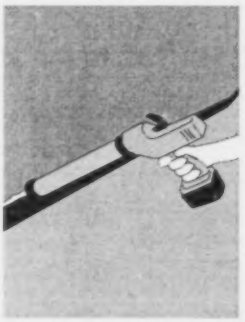
The Problem
Some workers spend long periods of time on their knees, causing knee and back problems. Some of these workers need to use both hands to perform their work. This increases the stress on the lower back.

The Solution
Known as kneeling creepers, they come with and without chest rests that can support the upper body to free the hands for work.

Benefits
This equipment reduces stress on the knees and lower back. It can help reduce discomfort and injury and may improve productivity.

POWERED CAULKING GUN

The Problem
High hand forces are required to force caulking out of normal caulking guns. This can lead to injury-causing stresses in the fingers, hands and forearms.



The Solution
Powered caulking guns can be powered by a battery or pneumatically. The hand doesn't have to squeeze a trigger to drive out the caulking material.

Benefits
Using this type of equipment eliminates the high, repetitive forces that can injure the fingers, hands and forearms. Productivity may even improve.

FROM THE COURTROOM

by Brian Caruk

You Can't Contract Out of Your Obligations

Alberta's Occupational Health and Safety Act imposes duties on all employers, workers, suppliers, contractors and prime contractors present at a work site. Because these duties run concurrent with each other, the structure of the act makes it clear that safety is everyone's concern. If any suggestions to the contrary are being advanced, beware.

Our legislation also recognizes that you may have more than one function at a work site. Where that is the case, you must meet the obligations relating to each of those functions. One example is that a company may be both a contractor and an employer at a work site. That company would have to ensure that any other employer whose activities it was directing complied with the legislation. It would also have to meet the standards set out for employers, such as ensuring the health and safety of its own workers.

Attempts by companies to contract out of all their obligations are, therefore, bound to fail. Imagine a work site where more than two employers are present, and where the company owning the site is defined as the prime contractor. It is certainly possible for the owner company to designate another company as the prime contractor, but it would be dangerous to assume that the owner company no longer had any obligations under the act. So long as that company was involved in directing activities at the work site, it would remain a contractor and quite probably an employer.

Accordingly, companies that retain the status of contractor or employer should be very cautious about assuming they will be immune from scrutiny or charges in the event of an incident.

I would like to close with a thank you to my former colleague, Tamara Trull, for her dedication to the Crown Prosecutor's office and for her previous and insightful columns. I wish her the best in her new endeavours.

To suggest topics for future columns, please send a message to brian.caruk@gov.ab.ca.

Brian Caruk is an Assistant Chief Prosecutor in Regulatory Prosecutions, Alberta Justice.

THERE'S ONLY ONE RIGHT WAY TO LIFT, RIGHT?

by Ray Cislo

The standard advice has always been to place the load between your knees, and then lift with your legs, not your back. That's the squat lift. What happens though when the load is as bulky as a stove, as long as a thick bundle of plastic piping, as heavy and unwieldy as a 30 kg bag of basmati rice, or as awkward as a 20 kg golden retriever that does not want to be at the veterinarian's office? What happens to the squat lift under those circumstances? More importantly, how is a person supposed to lift such loads?

First off, there is no single "correct" technique for lifting objects that reduces the possibility of injury. And despite their popularity, "how to lift safely" training programs have not been found to be an effective method of preventing back pain and injury. The best approach is still to design work areas, work methods and equipment to minimize the amount of manual lifting of low-lying objects. Doing so means that objects are lifted between knee and shoulder height—the most efficient lifting and lowering happens within this height range—almost eliminating the concern about correct technique.

Where lifting is required, alternatives to the squat technique include the kinetic and freestyle techniques. The kinetic technique involves getting the object moving smoothly, so that its momentum reduces the amount of effort the worker uses to lift the object. Swinging bags of rice and "tossing" boxes of photocopying paper onto pallets are examples of the kinetic technique in use. As its name suggests, the freestyle technique demonstrates worker creativity in devising a safe and effective way of lifting that borrows elements of several different techniques. How the worker actually performs the lift is often influenced by his or her work experience, body size and fitness.

Whatever technique or combination of techniques is used, it should have the following four characteristics:

(1) Keep the natural curve in your lower back
When standing straight, the lower back naturally curves to create a slight hollow. Always try to maintain this curve when lifting, lowering or moving objects. The spine and back are at their most stable in this position.

(2) Contract your abdominal muscles
Contract the abdominal muscles during lifting, lowering and moving activities. Sometimes described as "bracing," contracting the abdominal muscles even slightly improves spine stability and reduces the likelihood of injury.

(3) Avoid twisting
Twisting the back can make it less stable, increasing the likelihood of injury. Bracing helps reduce any tendency to twist.

(4) Hold it close
Keep the load as close to the belly button and body as possible. Doing so reduces the strain on the muscles of the back and trunk. If necessary, use protective clothing such as leather aprons so that sharp, dirty, hot or cold objects can be held as close to the body as possible.

Ray Cislo, P.Eng., B.Sc. (H.K.), is a safety engineering specialist at Alberta Employment and Immigration.

RESOURCES

Martimo K.P., J. Verbeek, et al. Effect of training and lifting equipment for preventing back pain in lifting and handling: systematic review. *BMJ (British Medical Journal)*, Jan 31, 2008.

Straker, L.M. A review of research on techniques for lifting low-lying objects: 1. Criteria for evaluation. *Work*, 19 (2002): 9–18.

Straker, L.M. A review of research on techniques for lifting low-lying objects: 2. Evidence for a correct technique. *Work*, 20 (2003): 83–96.

WORK SAFE ALBERTA AWARDS

2008 ALBERTA CHAMBERS OF COMMERCE AWARDS OF DISTINCTION

Work Safe Alberta, through the Occupational Health and Safety Council (OHS Council), partnered with the Alberta Chambers of Commerce to sponsor three health and safety awards. These awards were part of the 2008 Alberta Business Awards of Distinction, which celebrate business excellence in Alberta. The winners were announced at a dinner in Calgary on February 29, 2008.

Health and Safety Innovation Award of Distinction
This award recognizes an employer or individual who has been outstanding in developing an innovation to improve worker health and safety. Awards are offered in eight industry categories:

- Forestry
- Mining and Petroleum Development
- Manufacturing and Processing
- Construction and Construction Trade Services
- Transportation, Communication and Utilities
- Retail and Wholesale Trade Services
- Public Administration, Education and Health Services
- Business, Personal and Professional Services

Winners were selected in two of the eight categories.

Manufacturing and Processing Industry
Norwood Foundry Limited, Nisku—70 employees
Robert Day, general manager

Norwood Foundry produces a variety of custom metal castings. Carbon monoxide is produced during the casting process. Air-quality samples taken from worker breathing zones frequently exceeded the allowable limits. Norwood Foundry developed a solution to remove carbon monoxide from the work area using a unique system of ventilation hoods. For more information on this subject, see the story on page 8.

Mining and Petroleum Development Industry
Worldwide Matrix Inc., Grande Prairie—40 employees
Marcel Menard, president

Worldwide Matrix developed an early warning system that accurately predicts pipeline blowouts before they happen. This innovation gives operators time to react to the situation before it is too late. It has reduced the chance of explosions, fire, environmental damage or injuries to workers, especially in sour gas applications. Since 2004 no hydrocarbons have been released to the atmosphere due to pipe failure.

Health and Safety Leader Award of Distinction
This award recognizes an organization that leads its industry with an exemplary health and safety program, and a proven injury and illness prevention track record.

Albi Homes Ltd., Calgary—110 employees
Tony Mauro, founder and chairman

Calgary builder Albi Homes is committed to safety in the construction industry. The company works diligently to continually improve standards, policies and regulations pertaining to job site safety. Albi Homes has a 100 per cent commitment from all employees to take the Construction Safety Training System course, as well as many other safety-related courses. Albi Homes has not had any lost-time claims.

Health and Safety Improvement Award of Distinction
This award recognizes an organization that has dramatically improved its health and safety program and has significantly reduced its workplace injuries and illnesses.

There were no winners in this category for 2008.

Nominations for the 2009 awards will be accepted beginning in September 2008 at the Alberta Chambers of Commerce website (www.abchamber.ca).

For information about the three Work Safe Awards, go to www.worksafely.org and click on "work safe Alberta" or contact Rose Ann McGinty with Alberta Employment and Immigration at (780) 644-4690 or roseann.mcginty@gov.ab.ca.

Uly Currie (left), former deputy minister of Alberta Employment, Immigration and Industry, presented Allan Gallant, VP operations of Worldwide Matrix Inc., with the Health and Safety Innovation Award of Distinction.

CONDITIONING FOR SAFETY

"INDUSTRIAL ATHLETES" AT CARGILL'S HIGH RIVER PLANT MAKE THE LINK BETWEEN HEALTH AND SAFETY

by Allan Sheppard

Safety isn't just a matter of wearing the right gear. It's more than using the right equipment or following safe procedures. You also need a good attitude. And you need to be in good physical condition and health—much like an athlete is.

A team at Cargill Foods in High River has designed a program that it believes shows connections between workers' physical conditioning, health and safety, and the plant's bottom line. The team is headed by Katie Robinson, health services manager, and Renée Siki, ability manager. It includes nurses from Robinson's area, ability management team members from Siki's and staff from Brennan and Associates, a contractor providing physiotherapy and other services.

> Workers came back to the floor with a different attitude and could handle the work better.

The Cargill Foods plant in High River has 1900 employees and processes 4000 head of cattle per day. Meat processing is physically demanding work. In 2006, WCB paid $1.3 million for claims against Cargill. That claim level earned Cargill a five per cent rebate under the WCB's Partners in Injury Reduction (PIR) program—but Robinson and Siki thought the plant could do better. They wanted to look beyond the traditional safety principles and focus on health and wellness.

Industrial athletes

Robinson says that's why the team decided to call production floor workers "industrial athletes." Team members believe most people understand the connections between athletic performance, injuries and conditioning. But by making comparisons between sports and work, they believe they can help workers understand the connections between proper conditioning, work performance and safety.

Their team decided to focus on reducing repetitive stress injuries. They encouraged senior management to invest—or, as Robinson and Siki put it, "reinvest"—some of the company's WCB premium rebate in wellness programs. The costs would include a 72 square-metre (775 square-foot) on-site gym, which is known throughout the plant as the wellness centre, and provide equipment designed to promote conditioning suitable for Cargill's working environment. Cargill would also provide people to lead exercise groups and would allow employees to attend scheduled exercise classes during production times.

Management agreed. The proposal began in March 2006. Siki says that Cargill quickly saw a financial benefit. In 2007, Cargill's WCB claims costs dropped by 46 per cent, to

(Left to Right) Abigail Bello, Carlos Pujadas, Joey Tino and Jose Saavedra

$699,000, partly thanks to reductions in lost-time incidents and days lost from work (see sidebar).

Staff exercise classes

Cargill offers up to three exercise classes per week: voluntary sessions for day and evening shift workers and a compulsory orientation class for new employees. Robinson says that about half of the work force has used the program. Some take classes during shifts. Others work out before or after work.

Abdirishi Dhimbal is a supervisor on the slaughter/harvest production floor. He is responsible for 35 workers, who sort, grade and ship hides. It's heavy work. At the beginning of each shift, he takes the names of workers who want to take an exercise class so he can schedule breaks around work that has to be done. Dhimbal says he can't always find time for breaks, but he does his best.

At first Dhimbal thought exercise breaks would be a waste of time. But he became a "big-time" supporter when he noticed that workers "came back to the floor with a different attitude" and could handle the work better.

Aster Agonifer is a bagger on the production floor who is in her third year at Cargill. She started running on a treadmill and doing stretching exercises after the gym opened. She says she now uses the gym every day before and after her evening shift, for personal health as well.

Marilyn Sager is a senior production accounting clerk. She started using a treadmill three or four times a week at the end of 2007. A 12-year Cargill employee, Marilyn is now in her 50s. She is concerned about high blood pressure, weight and diet, thanks partly to a separate program that screens Cargill employees for health risks. She says she noticed an improvement after only two months of workouts.

"We've been saying for a while that we wish there was a gym here, so it's nice to have it," she says.

(Left to Right) Carlos Pujadas and Joey Tino

Abigail Bello leads the class in stretching.

Finding the connection

It isn't always easy to show a direct connection between prevention and results. But Robinson and Siki believe that as long as there are WCB savings and other benefits that coincide with their exercise strategy they will have management support.

A 15-year Cargill employee, Siki does work that is called disability management in other organizations, but she calls herself an ability manager because she believes in a positive attitude.

It isn't always easy to make the case for prevention with workers either.

"You need to be passionate about health, safety and prevention to make the case," says Siki.

"The continuous participation in the wellness centre speaks to the program's success," says Robinson. She believes that there is great value in comparing hard physical work to sports.

Allan Sheppard is a freelance writer based in Edmonton.

Lost-time incidents at Cargill's High River plant, 2005 to 2008

Fiscal year	Incidents	Days lost
June 2005 to May 2006	170	1353
June 2006 to May 2007	142	786
June 2007 to Feb. 15, 2008 (partial: 260 days)	65	357
June 2007 to May 2008 (projected*: 366 days)	92	503

*Assuming trend to February 15, 2008, continues to June 30, 2008.

Contact us any time
For occupational health and safety information and assistance, or to order Workplace Health and Safety publications, phone the Contact Centre at 1-866-415-8690 (415-8690 in Edmonton and area) or e-mail whs@gov.ab.ca.

Sign up for Workplace Health and Safety news
To be notified by e-mail of all new Workplace Health and Safety website postings, sign up for a FREE subscription service through employment.alberta.ca/cps/rde/xchg/hre/hs.xsl/2984.html.

Alberta Government Library - Labour Building Site
To review the large selection of occupational health and safety information materials available through the Alberta government, go to employment.alberta.ca/cps/rde/xchg/hre/hs.xsl/415.html.

To borrow materials, either contact your local library and make your requests through the inter-library loan system or visit the Alberta Government Library:

3rd floor, 10808 - 99 Avenue
Edmonton, AB T5K 0G5

Library phone
(780) 427-8533

Audio-Visual Services phone
(780) 427-4671

To reach either of the above numbers toll-free in Alberta, dial 310-0000 followed by the area code and phone number.

Library fax (780) 422-0084

Workplace Health and Safety is an Alberta Employment and Immigration program that falls under the jurisdiction of Minister Hector Goudreau.

THE LAST RESORT

REPORTING ON RECENT CONVICTIONS UNDER THE OCCUPATIONAL HEALTH AND SAFETY ACT

Between November 2007 and February 2008 five employers were prosecuted under the Occupational Health and Safety Act.

Carmacks Enterprises Ltd. On September 28, 2004, a worker received serious electric shock injuries when the raised dump trailer of a truck came into contact with a live overhead power line. The worker received the shock when he lifted a chain connected to a paving unit being filled from the dump trailer. Carmacks Enterprises pleaded guilty to failing to eliminate or control the hazard to ensure the health and safety of workers. The employer received a total penalty of $115,000, including a victim fine surcharge of $15,000.

Fitzgerald Construction (2001) Inc. On December 13, 2004, a worker was fatally injured when he was entangled in an unguarded tail pulley while removing excess gravel from the ground near the tail pulley. Fitzgerald Construction (2001) Inc. pleaded guilty to failing to provide safeguards where a worker may come into contact with moving parts of machinery. The employer received a total penalty of $300,750, including a fine of $10,000, a victim fine surcharge of $1500 and a payment of $288,500 to the Workers' Health Centre.

Erik Wyles, operating as E&L Trucking. On August 24, 2004, a truck driver was fatally injured as a result of a rigging failure that occurred during the hoisting of a work site trailer onto a flatbed. Erik Wyles, operating as E&L Trucking, pleaded guilty to failing to ensure that equipment is of sufficient size, strength and design and is made of suitable materials to withstand stresses imposed on it during its operation and to perform the function for which it is intended or designed. The employer received a total penalty of $75,000, including a fine of $5000, inclusive of victim fine surcharge, and a payment of $70,000 to Easter Seals.

DSI Mill Construction Ltd. On May 29, 2004, a worker was fatally injured when he fell 4.3 metres from a rolling scaffold. DSI Mill Construction Ltd. pleaded guilty to failing to make a report or plan in writing and available to workers at the work site who may be affected by it. The employer received a total penalty of $350,750, including a fine of $5000, a victim fine surcharge of $750 and a payment of $345,000 to the University of Alberta Faculty of Engineering, Engineering Safety and Risk Management Program.

K. Kenn Industries Ltd. On October 22, 2003, a worker was seriously injured when he was pinned between a winch line from one bulldozer and the underside of another bulldozer. The worker died three days later in hospital as a result of his injuries. K. Kenn Industries Ltd. pleaded guilty to failing to ensure the health and safety of workers. The employer received a total penalty of $357,500, including a fine of $50,000, a victim fine surcharge of $7500 and a payment of $300,000 to Lakeland College, of which $50,000 went to a scholarship in the name of the fatally injured worker and $250,000 went to the Heavy Duty Equipment Technician Program.

For details, go to employment.alberta.ca/cps/rde/xchg/hre/hs.xsl/135.html.

WORKPLACE FATALITIES

Investigated in Alberta

October 29, 2007 – February 14, 2008

Most work-related incident fatalities that fall under provincial jurisdiction are investigated by Workplace Health and Safety. In general, highway traffic, farm, disease or heart attack fatalities are not investigated.

In many cases, investigation into these fatalities is continuing. Final investigation reports are filed at the Alberta Government Library – Labour Building site and can be reviewed there or at http://employment.alberta.ca/cps/rde/xchg/hre/hs.xsl/781.html.

Total fatalities investigated in 2007: 33
Fatalities investigated in 2008
(year-to-date, as of February 14): 5

For further information about comparing trends in fatalities over time, please see the Occupational Fatalities in Alberta report:

employment.alberta.ca/documents/WHS/WHS-PUB_10yr_fatal.pdf.

A 47-year-old male worker was priming the carburetor of a gasoline-powered truck when the truck backfired and the worker's clothes caught fire. The worker died in intensive care two weeks after the incident.

A 43-year-old male truck driver was helping to load an empty 400-pound oil storage tank onto a flatbed truck when he was pinned between the tank and the truck.

A 52-year-old male worker fell from a roof while installing shingles. He was not wearing fall protection.

A 42-year-old male electrician was electrocuted while working with a co-worker to replace a contactor unit in a 4160-volt circuit breaker panel. The contactor unit contacted the 4160-volt live supply section because of a broken weld.

A 28-year-old male drilling crew worker was killed when the clam shell lid of a storage container struck him in the head. The lid had become stuck while the crew was closing the container. The worker went around the container to see why the lid was jammed when it collapsed, striking him.

A 61-year-old male worker was operating a propane-powered forklift in a bay with closed doors. The worker was overcome by carbon monoxide fumes and collapsed at the site.

A 55-year-old male worker entered a pup trailer that had contained produced (waste) water and had just been steam cleaned. The worker entered the vessel with a trouble light to check a crack in one of the baffles when an explosion occurred.

A 33-year-old male rig crew worker was fatally electrocuted when the derrick of the swab rig truck he worked on contacted a 25,000 volt, three-phase overhead power line. The crew had hit a large snowdrift when they pulled onto a lease road entrance. Because the road was impassable, the crew decided to remove equipment from the derrick. The derrick contacted the power lines when it was raised.

A 47-year-old male worker was operating a dump truck that was being loaded by an excavator when a 20-metre-long and 15-metre-high section of an excavated wall collapsed on the dump truck.

Return Undeliverable Canadian Addresses to:
CIRCULATION DEPARTMENT
Alberta Employment and Immigration
Workplace Partnerships (Director's Office)
7th Floor, Labour Building
10808 - 99 Avenue, Edmonton, AB T5K 0G5
E-mail whs@gov.ab.ca

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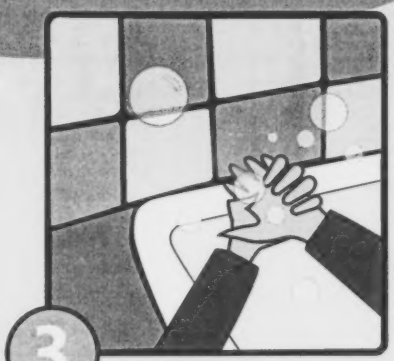
Don't take germs with you.
Wash your hands now!

1 Wet your hands.

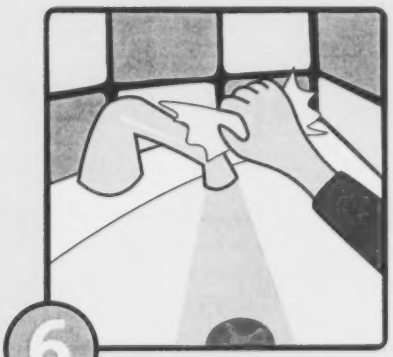
2 Put soap on your hands.



3 Rub all surfaces of your hands until you have a thick lather.

4 Rinse your hands in warm water.

5 Dry your hands with paper towels or a hand dryer.



6 Turn the tap off with a paper towel.

Capital Health
EDMONTON AREA